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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,706	03/23/2001	Chiharu Kamise	204980US02	4377
22850	7590	04/12/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			RYMAN, DANIEL J	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/814,706	KAMISE, CHIHARU	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3 and 4</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION*****Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: ref. 11, 12a-12f, and 15 (see page 4, line 27-page 6, line 6 and Fig. 1) and ref. 40, 41, 44a-44c, 45, and 46 (see page 7, line 3-page 8, line 4 and Figs. 4a and 4b). Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. (USPN 6,223,027) in view of Shirakata et al. (USPN 6,169,751).

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4. Regarding claim 1, Ono discloses, as prior art, an underground broadcasting system characterized in that broadcast information is broadcasted in an underground structure by the use of a wireless communication system (Fig. 1 and col. 1, lines 13-59). Ono does not expressly disclose that the information is broadcasted by the use of modulation on the basis of OFDM at the same base band frequency. Shirakata teaches, in a wireless communication system, broadcasting information by modulating the information on the basis of OFDM at the same band frequency since OFDM signals are "less prone to characteristic distortion due to a reflected wave" (col. 1, lines 11-50) where Examiner notes that subway tunnels will cause multiple reflected waves. It would have been obvious to one of ordinary skill in the art at the time of the invention to broadcast the information by the use of modulation on the basis of OFDM at the same band frequency since OFDM signals are less prone to characteristic distortion due to a reflected wave. Ono in view of Shirakata does not expressly disclose that the band frequency is a base band frequency; however, Ono in view of Shirakata discloses that the OFDM signals can be modulated to any band frequency (Shirakata: col. 1, lines 43-50). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Ono in view of Shirakata discloses that the band frequency can be any band frequency, it would have

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been obvious to one of ordinary skill in the art at the time of the invention to have the band frequency be the base band frequency, absent a showing of criticality by Applicant.

5. Regarding claim 2, Ono in view of Shirakata discloses that said underground structure is a network of underground railways (Ono: Fig. 1 and col. 1, lines 13-59).

6. Regarding claim 3, Ono discloses, as prior art, an underground broadcasting system comprising: an information delivering system (ref. 1) for delivering broadcast information to a transmitter apparatus (ref. 15) (Fig. 1 and col. 1, lines 13-59); a plurality of transmitter apparatuses (ref. 15) for wirelessly transmitting the broadcast information as delivered from said information delivering system (ref. 1) on carriers (Fig. 1 and col. 1, lines 13-59); and transmitting the broadcast information on said carriers and a receiver apparatus (ref. 21) for receiving the broadcast information as transmitted on said carriers (Fig. 1 and col. 1, lines 13-59) in order to obtain and output the broadcast information as reproduced (Fig. 1 and col. 1, lines 13-59). Ono does not expressly disclose that the plurality of transmitter apparatuses modulate the broadcast information on carriers as modulated in accordance with an OFDM modulation at the same base band frequency or that the receiving apparatus demodulates the broadcast information. Shirakata teaches, in a wireless communication system, broadcasting information by modulating the information on the basis of OFDM at the same band frequency since OFDM signals are "less prone to characteristic distortion due to a reflected wave" (col. 1, lines 11-50) where Examiner notes that subway tunnels will cause multiple reflected waves. Shirakata also discloses demodulating the information at the receiver in order to receive the transmitted information (col. 1, lines 11-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the plurality of transmitter apparatuses modulate the broadcast information on

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carriers as modulated in accordance with an OFDM modulation at the same band frequency since OFDM signals are less prone to characteristic distortion due to a reflected wave. It also would have been obvious to one of ordinary skill in the art at the time of the invention to have the receiving apparatuses demodulates the broadcast information in order to have the receivers properly receive the transmitted information. Ono in view of Shirakata does not expressly disclose that the band frequency is a base band frequency; however, Ono in view of Shirakata discloses that the OFDM signals can be modulated to any band frequency (Shirakata: col. 1, lines 43-50). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Ono in view of Shirakata discloses that the band frequency can be any band frequency, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the band frequency be the base band frequency, absent a showing of criticality by Applicant.

7. Regarding claim 4, Ono in view of Shirakata discloses that transmitter antenna and a receiver antenna are arranged in the underground structure (subway yard) in order to receive and transmit the broadcast information on said carriers as modulated by the OFDM modulation (Ono: Fig. 1 and col. 1, lines 13-59 and Shirakata: col. 1, lines 11-50).

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8. Regarding claims 5 and 12, Ono in view of Shirakata discloses that said information delivering system (ref. 1) and said transmitter apparatus (ref. 15) are linked with each other by an optical fiber network (Ono: Fig. 1 and col. 1, lines 13-59).

9. Regarding claims 6, 9, 13, and 16, Ono in view of Shirakata discloses that said receiver apparatus is a mobile receiver terminal (subway train) (Ono: Fig. 1 and col. 1, lines 13-59).

10. Regarding claims 7, 8, 10, 11, 14, 15, 17, and 18, Ono in view of Shirakata discloses that said underground structure is a network of underground railways (Ono: Fig. 1 and col. 1, lines 13-59).

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cheong et al. (USPN 6,477,154) see entire document which pertains to creating a wireless communication system that can be used in a tunnel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

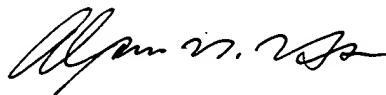
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJR

Daniel J. Ryman  
Examiner  
Art Unit 2665



ALPUS H. HSU  
PRIMARY EXAMINER